

In the Claims:

1. (Canceled) A translation system, comprising:
a front end for identifying source elements in a
source file; and

5 a back end for generating a translation file having
translation elements corresponding to translation of said
identified source elements and having an interface for
receiving inputs for modifying said translation.

10 2. (Canceled) The system of Claim 1, wherein the
source file is for a source device and the translation file
is for a disparate target device.

15 3. (Canceled) The system of Claim 1, wherein the
source file is a linear assembly file for a target device
and the translation file is a scheduled assembly file for
that device.

20 4. (Canceled) The system of Claim 1, wherein the
source file is an assembly language file.

5. (Canceled) The system of Claim 4, wherein the
translation file is an assembly language file.

25 6. (Canceled) The system of Claim 1, wherein
said translation is a context-dependent translation based
on static analysis of the source file.

30 7. (Canceled) The system of Claim 1, wherein the
back end further comprises:

a translator for performing a context-dependent translation, the translator comprising:

a translation machine description for mapping source opcodes to target opcodes;

5 a source machine description containing a description of source opcodes and source operands in a generic representation;

a target machine description containing a description of target opcodes and target operands in a generic
10 representation; and

wherein the translator receives a source instruction from said front end, utilizes the translation machine description and source machine description and target machine description to translate source elements into
15 target elements.

8. (Canceled) The system of Claim 7, wherein the proper target opcode is chosen from a group of potential target opcodes by comparing the target opcode and target
20 operand with the source opcode and source operand.

9. (Canceled) The system of Claim 7, wherein two or more source opcodes can be combined to a single target opcode when there is a target opcode that represents the
25 two or more source code opcodes.

10. (Canceled) The system of Claim 1, wherein the user interface is a graphical user interface.

30 11. (Canceled) The system of Claim 10, wherein the graphical user interface displays at least a portion of the source elements in a source window, at least a portion

of the translation elements in a translation window, and the source and translation windows are displayed side-by-side.

5 12. (Canceled) The system of Claim 11, wherein corresponding groups of elements of the source and translation files are aligned in the source and translation windows.

10 13. (Canceled) The system of Claim 11, wherein at least one of the source and translation windows is operable to display a status icon for an element in the window.

 14. (Canceled) A method for performing
15 translation comprising:
 receiving a source file;
 identifying source elements in the source file;
 generating a translation file having translation
elements by performing a context-dependent translation of
20 the source elements;
 displaying the translation elements in an interface
for receiving user inputs; and
 in response to user inputs, automatically regenerating
selected translation elements based on the user inputs.

25 15. (Canceled) The method of Claim 14, wherein the source file is for a source device and the translation file is for a disparate target device.

30 16. (Canceled) The method of Claim 14, wherein the source file is a linear assembly file for a target

device and the translation file is a scheduled assembly file for said target device.

17. (Canceled) The method of Claim 14, wherein
5 the source file is an assembly language file.

18. (Canceled) The method of Claim 17, wherein the translation file is an assembly language file.

10 19. (Canceled) The method of Claim 14, further comprising:

performing static analysis of the source elements in the source file; and

performing context-dependent translation of the source
15 elements based on the static analysis.

20. (Canceled) The method of Claim 14, wherein the step of generating a translation file further comprises:

20 converting an opcode of a source machine to an opcode of a translation machine file by comparing the source opcode to possible translation opcodes;

converting the operand of the source opcode by comparing an operand of the source opcode in a generic
25 expression with a generic expression for a translation operand;

combining the translation opcode and the translation operand to form a translation.

30 21. (Canceled) The method of Claim 20, wherein the step of converting an opcode of the source file further comprises choosing a translation opcode from a group of

potential translation opcodes by comparing the translation opcode and translation operand with the source opcode and source operand.

5 22. (Canceled) The method of Claim 20, wherein the step of converting the source opcode further comprises the step of combining two or more source opcodes into a single translation opcode when there is a translation opcode that represents the two or more source opcodes.

10 23. (Canceled) The method of Claim 14, wherein the user interface is a graphical user interface.

15 24. (Canceled) The method of Claim 23, further comprising:
 displaying the source elements in a source window;
 displaying the translation elements in a translation window; and
 displaying the source and translation windows side-by-side in the graphical user interface.

25 25. (Canceled) The method of Claim 24, further comprising aligning corresponding groups of elements of the source and translation files in the source and translation windows.

30 26. (Canceled) The method of Claim 24, further comprising displaying a status icon for an element in at least one of the source and translation windows.

27. (Canceled) A translation system, comprising:
a computer capable of executing a program, and

an interactive program for translating code for a first processor into code for a second processor and capable of being executed on said computer.

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Please amend claim 28 as follows.

28. (Currently Amended) A graphical user interface for a translation system, the translation system
10 translating source elements of a source file into
translation elements of a translation file, the user
interface comprising:

a source window operable to display at least a portion of a source file; and

15 a translation window operable to display at least a portion of a translation file simultaneously with the source window, and

user input apparatus, the user input apparatus
permitting a user to modify selected translation elements.

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Please amend Claim 29 as follows.

29. (Currently Amended) The user interface of
Claim as recited in claim 28, wherein corresponding groups
25 of elements in the source and translation files are aligned in the source and translation windows.

Please amend Claim 30 as follows.

30. (Currently Amended) The user interface of
Claim as recited in claim 29, further comprising a
5 synchronized scrolling mechanism operable to maintain
alignment between corresponding groups in the source and
translation windows.

Please amend Claim 31 as follows.

10 31. (Currently Amended) The user interface of
Claim as recited in claim 28, wherein at least one of the
source and translation windows is operable to display a
status icon for elements in the window.

Please amend Claim 32 as follows.

15 32. (Currently Amended) The user interface of
Claim as recited in claim 31, wherein the status icon
20 indicates that the translation of an element is incorrect.

Please amend Claim 33 as follows.

25 33. (Currently Amended) The user interface of
Claim as recited in 31, wherein the status icon indicates
that the translation of an element should be confirmed by
the user.

Please amend Claim 34 as follows.

34. (Currently Amended) The user interface of
Claim as recited in claim 31, wherein the status icon
5 indicates that the translation of an element could be
improved with additional information.

Please amend Claim 35 as follows.

10 35. (Currently Amended) The user interface of
Claim as recited in claim 31, wherein the status icon
indicates that additional information is needed for the
translation of an element.

15 **Please amend Claim 36 as follows.**

36. The interface of Claim 28, wherein selection of
an element in one of the windows automatically selects
corresponding elements in the other window.

20 **Please amend Claim 37 as follows.**

37. (Currently amended) The user interface of
Claim as recited in claim 28, further comprising an output
25 window indicating each source element for which additional
information is needed to complete translation.

Please amend Claim 38 as follows.

38. (Currently Amended) The user interface of
Claim as recited in claim 28, further comprising an output
5 window indicating each source element for which user
interaction is indicated.

Please amend Claim 39 as follows.

10 39. (Currently Amended) A method for displaying
translation information resulting from the translation of
source elements of a source file into translation elements
of a translation file, the method comprising:

displaying at least a portion of a source file in a
15 source window; and

displaying at least a portion of a translation file in
a translation window simultaneously with the source window,
and

when required, modifying translation elements in the
20 displayed translation file by user input.

Please amend Claim 40 as follows.

40. The method ~~of Claim~~ as recited in claim 39,
25 further comprising aligning corresponding groups of
elements in the source and translation files in the source
and translation windows.

Please amend Claim 41 as follows.

41. (Currently Amended) The method ~~of Claim as~~
recited in claim 39, further comprising maintaining
5 alignment of corresponding groups in the source and
translation windows during scrolling operations.

Please amend Claim 42 as follows.

10 42. (Currently Amended) The method ~~of Claim as~~
recited in claim 39, further comprising prompting a user
for additional information to aid the translation of the
source file.

15 **Please amend Claim 43 as follows.**

43. (Currently Amended) The method ~~of Claim as~~
recited in claim 39, further comprising prompting a user
for additional information to aid the translation of an
20 element by displaying a status icon for the element in at
least one of the source and translation windows.

Please amend Claim 44 as follows.

25 44. (Currently Amended) The method ~~of Claim as~~
recited in claim 43, wherein the status icon indicates that
the translation of an element is incorrect.

Please amend Claim 45 as follows.

45. (Currently Amended) The method ~~of Claim~~ as
recited in claim 43, wherein the status icon indicates that
5 the translation of an element should be confirmed by user.

Please amend Claim 46 as follows.

46. (Currently Amended) The method ~~of Claim~~ as
10 recited in claim 43, wherein the status icon indicates that
the translation of an element could be improved with
additional information.

Please amend Claim 47 as follows.

15 47. (Currently Amended) The method ~~of Claim~~ as
recited in claim 28, further comprising displaying a
listing of all source elements for which user interaction
is indicated.

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